Science and Engineering Profile: Michigan

Characteristic	State	U.S.	Rank	Characteristic	State	U.S.	Rank
Doctoral scientists, 2001[1]	14,630	542,940	13	Total R&D performance, 2000 (millions)	$18,892	$244,855	2
Doctoral engineers, 2001[1]	4,570	112,770	8	Industry R&D, 2000 (millions)	$17,640	$187,544	2
S&E doctorates awarded, 2001[1]	906	25,509	8	Academic R&D, 2001 (millions)	$1,107	$32,716	9
of which, in engineering	29%	22%		of which, in life sciences	58%	59%	
in life sciences	21%	26%		in engineering	18%	15%	
in social sciences	16%	16%		in social sciences	10%	4%	
S&E postdoctorates, 2001[1]				Public higher education current-fund			
in doctorate-granting institutions	1,115	42,899	10	expenditures, 2000 (millions)	$7,330	$152,068	4
S&E graduate students, 2001[1]				Number of SBIR awards, 1999-2001	221	13,650	18
in doctorate-granting institutions	17,504	452,411	9	Utility patents issued to state residents, 2001	3,854	87,605	5
Population, 2002 (thousands)	10,050	292,228	8	Gross state product, 2000 (billions)	$325	$10,003	9
Civilian labor force, 2002 (thousands)	5,001	146,712	8	of which, agriculture	1%	1%	
				manufacturing, mining, construction	32%	22%	
Personal income per capita, 2001	$29,788	$30,472	19	transportation, communication, utilities	7%	8%	
				wholesale and retail trade	16%	16%	
Federal spending				finance, insurance, real estate	14%	19%	
Total expenditures, 2001 (millions)	$51,632	$1,753,011	9	services	20%	22%	
R&D obligations, 2001 (millions)	$1,176	$78,006	21	government	10%	12%	

[1]Data on graduate students, doctoral scientists, doctoral engineers, and postdoctorates include all graduate degree (except M.D.) candidates and recipients in S&E fields, including health Data on S&E doctorates awarded do not include health fields.

NOTES: Rankings and totals are based on data for the 50 States, District of Columbia, and Puerto Rico. Reliability of the estimates of industry R&D and of doctoral scientists and engineers varies by State, because the sample allocation was not based on geography. The rankings do not take into account the margin of error of estimates from sample surveys.

Federal Obligations for Research and Development by Agency and Performer: Michigan, Fiscal Year 2001

Agency	Performer							State rank, total
	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	
	[In thousands of dollars]							
Total, all agencies	1,175,653	119,244	0	372,828	646,016	23,812	13,753	21
Department of Agriculture	30,491	7,359	0	59	23,073	0	0	24
Department of Commerce	21,399	7,198	0	9,670	2,218	1,270	1,043	10
Department of Defense	479,762	97,470	0	312,350	68,961	981	0	18
Department of Energy	21,536	0	0	553	20,983	0	0	24
Dept. of Health & Human Services	467,422	749	0	28,936	411,969	18,562	7,206	12
Department of the Interior	6,010	5,729	0	0	135	0	146	19
Department of Transportation	22,059	0	0	11,400	5,301	0	5,358	7
Environmental Protection Agency	6,001	739	0	495	2,507	2,260	0	20
National Aeronautics and Space Admin	17,436	0	0	6,780	10,626	30	0	27
National Science Foundation	103,537	0	0	2,585	100,243	709	0	7
State rank, total	21	21	na	19	9	26	7	na

KEY: FFRDC = federally funded research and development center; SBIR = small business innovation research; na = not applicable.

NOTES: Federal R&D obligations are as reported by funding agencies. Ranks and totals are based on data for the 50 States, District of Columbia, and Puerto Rico.

SOURCES: Prepared by the National Science Foundation/Division of Science Resources Statistics. Data compiled from numerous sources -- see the section, "Data Sources for Science and Engineering (S&E) State Profiles".